

# CLAIMS

1. A recording medium having a data structure for managing random/shuffle reproduction of video data recorded on the recording medium, comprising:

5       at least one piece of title management information;  
      a playlist directory area storing at least one playlist including at least one playitem; and

      a stream directory area storing at least one clip containing video data associated with the playlist, wherein:

10       the title management information includes at least one segment that is associated with at least one playlist in the playlist directory area; and

      each playitem in the playlist is a unit to be randomized or shuffled during random/shuffle reproduction mode.

15       2. A recording medium set forth in claim 1, wherein a title managed by the title management information is a logical unit of video data that is regarded as a reproduction unit by users.

      3. A recording medium set forth in claim 1, wherein the title management information includes information on branch points at  
20 which reproduction path is divided during reproduction.

      4. A recording medium set forth in claim 3, wherein the branch point information has segments, each segment being assigned to each reproduction path.

      5. A recording medium set forth in claim 4, wherein the  
25 segments assigned to the different reproduction paths are associated with a plurality of distinct playlists.

      6. A recording medium set forth in claim 5, wherein the plurality of distinct playlists are associated with distinct clips or disjoint intervals of one clip.

30       7. A recording medium set forth in claim 1, wherein a random/shuffle reproduction block is designated by at least one playlist.

8. A recording medium set forth in claim 7, wherein one playlist that is designated as a random/shuffle reproduction block includes a plurality of playitems.

9. A recording medium set forth in claim 1, wherein  
5 information on the random/shuffle reproduction block is stored in the title management information.

10. A recording medium set forth in claim 1, wherein information on the random/shuffle reproduction block is stored in the playlist.

10 11. A recording medium set forth in claim 1, wherein the playitem is associated with a whole clip or a portion of clip based on clip information stored in a clip information directory.

12. A method for recording a data structure for managing random/shuffle reproduction of video data on a recording medium,  
15 comprising the steps of:

recording at least one piece of title management information on the recording medium;

recording at least one playlist including at least one playitem in a playlist directory area on the recording medium; and

20 recording at least one clip associated with the playlist in a stream directory area on the recording medium, such that:

the title management information includes at least one segment that is associated with at least one playlist in the playlist directory area; and

25 each playitem in the playlist is a unit to be randomized or shuffled during random/shuffle reproduction mode.

13. A method for reproducing a recording medium having a data structure for managing random/shuffle reproduction of video data thereon, comprising the steps of:

30 reproducing one piece of title management information including at least one segment from the recording medium;

reproducing at least one playlist including at least one playitem from a playlist directory area on the recording medium, the playlist being associated with the segment; and

35 reproducing at least one clip associated with the playlist

from a stream directory area on the recording medium, wherein:

each playitem in the playlist is selected in random or shuffle mode; and at least a portion of the clip corresponding to the selected playitem is reproduced.

5        14. An apparatus for recording a data structure for managing random/shuffle reproduction of video data on a recording medium, comprising:

a drive for driving an optical recording means that records data on the recording medium;

10        an encoder for encoding the video data; and

a controller for controlling the drive to record the encoded video data on the recording medium, wherein:

the controller controls the drive to record at least one piece of title management information on the recording medium, to record  
15 at least one playlist including at least one playitem in a playlist directory area on the recording medium, to record at least one clip associated with the playlist in a stream directory area on the recording medium, such that

the title management information includes at least one segment,  
20 the segment being associated with at least one playlist in the playlist directory area, each playitem in the playlist being a unit to be randomized or shuffled during random/shuffle reproduction mode.

15. An apparatus for reproducing a recording medium having a data structure for managing random/shuffle reproduction of video  
25 data thereon, comprising:

a drive for driving an optical reproducing means that reproduces data recorded on the recording medium; and

a controller for controlling the drive to reproduce one piece of title management information including at least one segment from  
30 the recording medium, to reproduce a playlist associated with the segment and having at least one playitem from a playlist directory area on the recording medium, to reproduce at least one clip associated with the playlist from a stream directory area on the recording medium; wherein:

35        each playitem in the playlist is selected in random or

shuffle mode; and at least a portion of the clip corresponding to the selected playitem is reproduced.